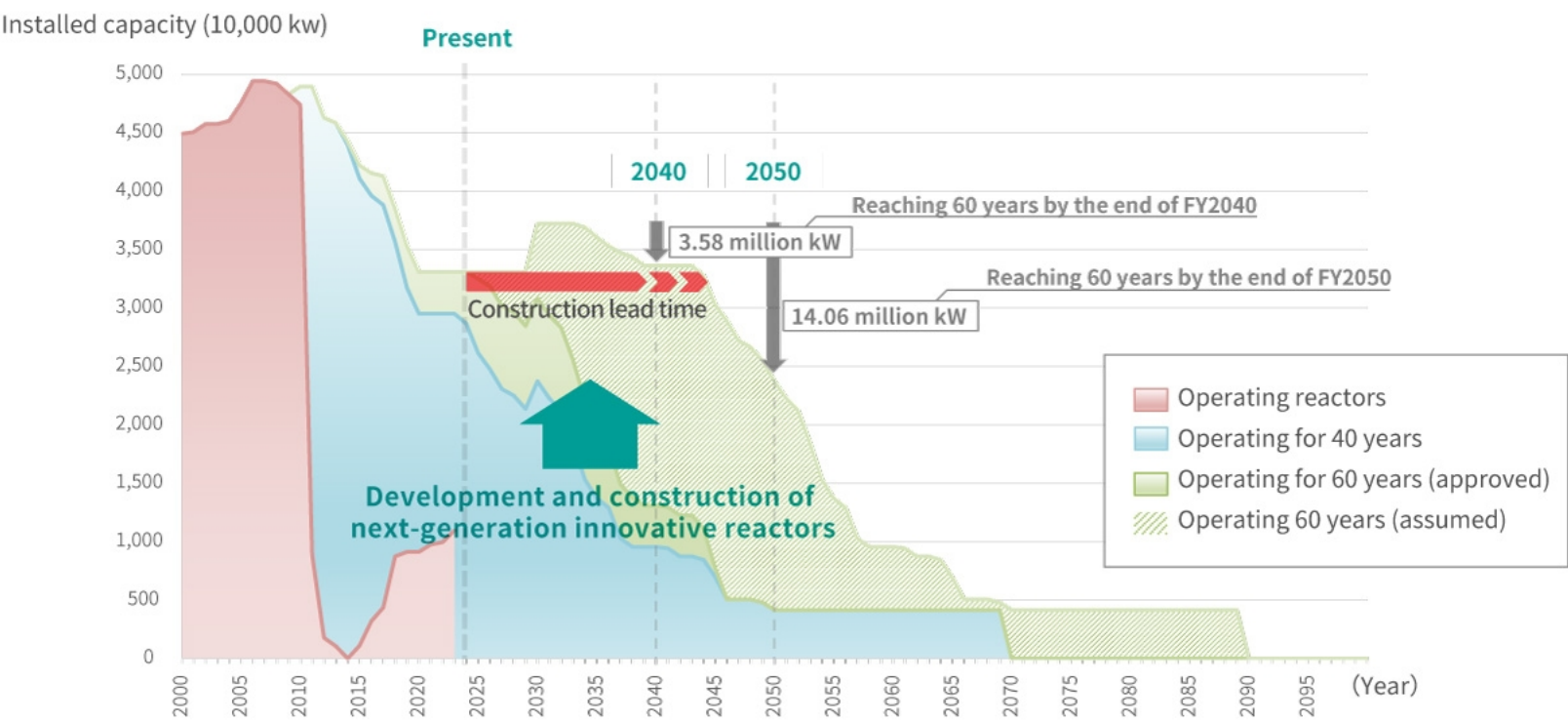


New and expanded power plants

Development and Construction of Next-generation Innovative Reactors



Source: Excerpt from “Next-General Innovative Reactors: Present and Future, October 2024,”
Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry

The electricity demand in Japan is expected to increase due to advances in digital technologies. As securing decarbonized power sources can influence Japan’s economic growth and the competitiveness of its industry, it is extremely important to make the most of both renewable energy and nuclear power sources, aiming for a balanced power source mix rather than relying on specific power sources.

Given these circumstances, it will be difficult to meet Japan’s capacity needs by simply restarting or extending the operating life of the nuclear power plants. Various options are therefore being explored, including the redevelopment of innovative next-generation reactors incorporating new safety mechanisms on the site of nuclear power plants scheduled for decommissioning.

Innovative next-generation reactors currently under development include innovative light-water reactors, small light-water reactors, fast reactors, high-temperature gas reactors, and nuclear fusion.

Related Link

[Research and development/New reactors](#)